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Orsett Psychological Services
PO Box 179
Grays
Essex
RM16 3EW

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Human Cognition and Cognitive Science: A Review of the Limitations of Modelling Human Cognition using Computer Technology - Part 2: Common Sense

INTRODUCTION

The term common sense is used widely and can represent a range of notions from knowledge closely linked to general cognition, to sayings in folklore. In psychology, opinions about the relevance of identifying common sense as a subject in its own right are divided. This division spans two extremes, ie: the so-called transitive and intransitive views.

The transitive view suggests that everything that we talk about is socially specific - nothing in our experience exists outside a social context - so that common sense is meaningless outside this context. The intransitive view suggests that the subject of discourse is tangible - it exists independently of social context as if it were "physical".

These positions are described in Bhaskar (1978) with respect to his "central paradox of science". Thus, in one way of viewing knowledge, Bhaskar states that:

Men in their social activity produce knowledge which is a social product much like any other, which is no more individual of its producer and the men who produce it than motor cars, armchairs or books.

The other way of looking at knowledge is that it is independent of man:

The specific gravity of mercury, the process of electrolysis, the mechanism of light propagation. None of these "objects of knowledge" depend upon human activity. If men ceased to exist sound would continue to travel and heavy bodies fall to the earth in exactly the same way.

Some psychologists - such as those with social constructionist views - suggest that all knowledge is socially constructed, and that separating knowledge into categories is artificial. On the other hand, many cognitive scientists see common sense as tangible and definable. Although the intransitive view does have merit to the extent that certain aspects of common sense are indeed socially specific, in this article we tend to take a more intransitive stance, although accepting the limitations that come with this approach.

SOME DEFINITIONS BY OTHER AUTHORS

Common sense may be thought of as a "framework" of knowledge with which we try to make sense of new information. Common sense knowledge enables us to maintain a log of predictability of the environment. This assists us because "a world of continuity and predictability is far easier to live in than one in which we have to try to make sense, in every passing moment, of every new piece of information" (Hollin 1995).

Garnham states that in psychology, there is a lot of information about problem-solving and arguably, there is a difference between problem-solving and "everyday reasoning". This "everyday reasoning" may be thought of as comprising common sense evaluation, as well as other mental processes such as intuition (Garnham 1991).

Boden (1988) says "Commonsense reasoning is richer and more subtle than is often realized". She also says that "like other advances in AI-technology, problem-solving programs exploit psychological intuitions of a very general kind. By and large work on the automation of problem-solving has been done with little or no regard for detailed psychological verisimilitude".

Searle mentions that "common sense is largely a matter of widely held and usually unchallenged beliefs; it is a matter of common opinion". He also mentions that there is no clear notion of what common sense is, but that it is not a fundamental cognitive process - although it does assist cognition (Searle 1999).

Pinker suggests that the rules of common sense are hard to set down. He states that "Common Sense knowledge is not an almanac about life that can be dictated by a teacher or down-loaded like an enormous database" (Pinker 1998).

OUR APPROACH - COGNITIVE AND SOCIAL COMMON SENSE

In this article, we refer to common sense as information or knowledge that supports everyday cognition. In cognitive science, it is convenient to talk about "common sense" as a cognitive process. However, we also make a distinction between two types of common sense knowledge: cognitive common sense and social common sense.

This distinction is inspired by the work of developmental psychologists who identify two related, if not unique processes in child development - the development of understanding the physical world, and the development of understanding the social world (Harris

1995). This also ties in with the view that common sense is important for self-preservation, to support general problem solving, and is necessary to function in society. We also think of common sense as distinct from intuition. Intuition describes cognitive processes that are "automatic, holistic - (it occurs) where quick decisions are made according to simple heuristics developed through experience" (Baron and Byrne 1996). We will discuss intuition in another article; for now we simply indicate that understanding and modelling human intuition is a separate problem although not entirely unrelated to understanding and modelling common sense.

COGNITIVE COMMON SENSE KNOWLEDGE

This is the knowledge of cause-and-effect relating to events and existents in the world. Many of the cognitive skills relating to "common sense" have been illuminated by Jean Piaget in his work on child development - more particularly in his characterisation of the universal abilities that children acquire as part of their cognitive development. These early cognitive abilities include the understanding of shapes and sizes, gravity and the relationships and causality of behaviour.

For example, by 8 months old, the young child realizes that an object which is out of reach can be moved nearer by pulling the blanket on which the object lies. At each stage of cognitive development, important abilities are learnt; thus object permanence is usually developed by 1 year old, ie the "conviction the objects in our world have continuing existence when they are not actually in our sight" (Light and Oates 1990).

In general, cognitive common sense knowledge is procedural or "cause-and-effect" and as a result it is feasible to map this knowledge onto computer representations. In practice, there are limitations when trying to do this - some of which are discussed later in this article.

SOCIAL COMMON SENSE KNOWLEDGE

The concept of social common sense, inspired by Bruner (1990), is often called social cognition and is studied within social psychology. Social cognition is not studied widely in AI but it is very important in describing human behaviour. Computer modelling of social cognition is not easy because social cognition is often illogical and irrational. This is illustrated in studies of human attribution. Attribution is the process by which we try to make sense of "the causes behind others` behaviours and, on occasion our behaviour

too" (Baron and Byrne 1996). Causes for human behaviours can be attributed to being of internal origin, ie: of the person him/herself, or of external origin, ie: of the environment or of other people in the environment.

These causes of behaviour are not applied logically or objectively, leading to "attributional biases" or "attribution errors" such as:

a) Self serving bias: The tendency to make an external attribution for bad things and an internal attribution for good things; eg: a person passes an exam because of their hard work, but fails because the exam was difficult.

b) Just World Hypothesis (Lerner 1980): This suggests that "people have a need to believe that their environment is a just and orderly place where people usually get what they deserve" (Lerner and Miller 1978).

c) False consensus bias: The assumption that most people share our own attitudes and beliefs.

Other aspects of social common sense include the illusion of control and optimistic bias. For example, car drivers tend to have unrealistic optimism when in control - perceiving that their chances of an accident are less than other drivers.

COMMON SENSE AND LEARNING

There is a strong link between common sense reasoning and learning. A child has very little common sense knowledge (although it does have strong instincts and reflex behaviours) of either cognitive common sense or social common sense. So, for instance, a child doesn't know that a fire is hot, or that boiling water is dangerous, or that playing with a safety pin in the electricity socket is dangerous. It has to learn all this.

Certainly common sense knowledge is linked to learning and observation. But because we have the ability to manipulate language, we can also instruct others, and learn from other people's experiences. This can also contribute to building up common sense knowledge. So common sense is learnt through a range of mechanisms, such as:

- * Advice and explicit teaching: eg: parents instructing children that the fire is hot and they shouldn't put their hand in it.

- * Observation: cause and effect.

* Experience: Learn from making a mistake.

This close relationship between learning and common sense also presents a problem for computer models of cognition, because computer models of learning are often limited and incapable of dealing with the complexities of human learning.

MAPPING TO COMPUTER MODELS

Problems arise when trying to decide which elements of common sense knowledge are needed within an accurate computer model of cognition, and the level of detail of this knowledge (this depends in part on the fidelity of the model). Some "bits" of common sense knowledge are more important for certain applications than others. But often, seemingly "obvious" truths at very fine levels of detail need to be made explicit. This means that when trying to build systems with wider scope; ie: not brittle, more and more detail is added to the model in order to capture that entire scope of the knowledge being represented.

Structuring and organizing this information is difficult and time consuming, as it requires an ontology of the problem domain. Lenat has attempted to build this common sense ontology of "everything" as a foundation for future common sense systems. In general, when devising a system with a limited common sense ability, the main problems seem to be:

1. Identifying the relevant bits of common sense knowledge to the problems (rules) at hand - it is generally impractical to model the "whole world".
2. Representing this knowledge in an understandable and succinct manner, capable of being understood and used by machines and humans.
3. Formalizing techniques for using this knowledge, and for building new knowledge from experience in learning systems.

Much of this is evident in the work of John McCarthy. Over a period of 30 years, McCarthy has been a leading exponent in understanding and modelling the intellectual ability realized by human common sense. McCarthy uses logic as the main theoretical tool in this research.

At the outset of his research, he proposed to write a program in which previous knowledge (ie: human common sense) is represented in logic constructs, and in which a wide range of immediately logical consequences could be derived from anything that it is told. He was unable to

fulfil this goal in its entirety because, in order to achieve such a system, a wide range of problems became apparent, to which there are no simple solutions. These problems tended to belong to one of two camps, as described in McCarthy's paper on "Philosophical Problems" (McCarthy and Hayes 1969). Thus, he states that a reasoning system requires two components:

1. A knowledge representation which is epistemologically adequate - ie: can be used to express the facts discovered during program operation - and is also adequate enough to express all currently known facts and knowledge.
2. An appropriate and comprehensive heuristic analysis system - ie: a system of algorithms and procedures that allow the program to perform reasoning upon the knowledge stored within.

McCarthy believed that the main limitation of AI systems for handling common sense at the time of writing was in the weakness of the knowledge representation formalisms being used (McCarthy 1987). He suggested that common sense systems need to employ a powerful Knowledge Representation language - one based on the symbolism of predicate calculus.

"Implicit in the work of McCarthy (1959) is the idea of a general purpose common sense database (where) common sense information would be written as logical sentences and included in the database. A goal-seeking program could consult the database for facts needed to decide how to achieve its goal. Especially prominent in the database would be the facts about the effects of actions" (McCarthy 1987).

This led to the derivation of situation calculus (McCarthy and Hayes 1969) to provide a way of expressing the consequences of actions in a computer system independent of the problem being tackled.

SITUATION CALCULUS

In predicate calculus, logic sentences are made up of terms and functional expressions. Thus, for example, the statement:

object x is a red apple may be expressed as follows:

(1) apple(x, red).

Logic symbols can be used to combine functional

expression terms to form logical sentences:

Eg: If x is a red apple and it is September, then x is ripe

$$(2) \quad \text{apple}(x, \text{red}) \cap \text{month}(\text{September}) \rightarrow \text{ripe}(x)$$

McCarthy described plans to achieve goals in logic by using a predicate (such as the predicate "did") to reason about functional expression terms:

Eg: "Doing" the act of going from home to the airport (by driving) leads to my being at the airport

$$(3) \quad \text{did}(\text{go}(\text{home}, \text{airport}, \text{driving})) \rightarrow \text{at}(\text{I}, \text{airport})$$

He identified the need to add the "situation" into these sentences by suggesting that "the complete state of affairs at some instant of time" should be included in logic sentences. If a given situation is represented by the symbol "s", then McCarthy proposed adding the variable "s" to the sentence:

Eg: I am at the airport in situation "s"

$$(4) \quad \text{at}(\text{I}, \text{airport}, s)$$

A further extension to the calculus, ie the addition of the "result" function permitted the description of the effect(s) of an action:

Eg: A description of the state that results when person "p" does action "a" in state "s" may be described as:

$$(5) \quad \text{result}(p, a, s)$$

So, the fact that I am at the airport may be described as being the result of driving to the airport:

$$(6) \quad \text{at}(\text{I}, \text{airport}, \text{result}(\text{I}, \text{go}(\text{home}, \text{airport}, \text{driving}), s))$$

Or more completely:

$$(7) \quad \text{at}(\text{I}, \text{home}, s) \cap \text{at}(\text{car}, \text{home}, s) \rightarrow \text{at}(\text{I},$$

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airport, result(I, go(home, airport, driving), s))
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For a more detailed discourse about the situation calculus, see McCarthy (1969).

When defining axioms (truth statements) in situation calculus about the result of actions, McCarthy and Hayes showed that situation calculus statements describing all the things that do not change when an action is performed (so-called "frame-axioms") also need to be explicitly defined. Of course defining explicit causes and effects, and then all of the static components of the system becomes an extensive task, and one that is arguably never complete as there are always new ways of looking at a problem or group of problems for computer representation.

The calculus is also limited in that it is only applicable to reasoning about discrete events, each of which results in a total situation. Continuous and parallel events cannot be covered in this knowledge representation.

LIMITATIONS OF THE SITUATION CALCULUS - QUALIFICATION

The situation calculus, even when used to represent problems concerning discrete events only, did not work very well. The general purpose problem solvers using the calculus ran too slowly because the search control through the knowledge in the knowledge base was unbounded (ie: the entire knowledge base would have to be searched over and over again to find solutions to problems). The second problem was that the situation calculus axioms were not general enough. This is described by McCarthy as the "qualification problem".

Consider putting an axiom in a common sense database asserting that birds can fly. Clearly, the axiom must be qualified in some way, since penguins, dead birds, and birds whose feet are encased in concrete can't fly. A careful construction of the axiom might succeed in including the exceptions of the penguins and dead birds, but clearly we can think up as many additional exceptions like birds with their feet encased in concrete as we like. Formal, nonmonotonic reasoning (1) (see McCarthy 1980, 1986; Doyle 1977; McDermott and Doyle 1980; Reiter 1980) provides a formal way of saying that a bird can fly unless there is an abnormal circumstance and reasoning that only the abnormal circumstances whose existence follows from the facts being taken into account will be considered (McCarthy 1987).

In order to extend the situation calculus to deal with nonmonotonic reasoning, McCarthy suggests that axioms in situation calculus can be written to formalize

the typical abnormal circumstances in which reasoning occurs. This is done by defining situation calculus statements or sentences using a special predicate (ab or abnormal) to indicate where reasoning is abnormal.

For example, the statement below states that for all objects of type "x" in all events of type "e", that an object "x" does not change its location (as given by the function "loc") unless the triple consisting of the object "x", the event "e" that occurs and the situation "s" in which it occurs are abnormal in aspect "1"

$$(8) \quad \forall x e \quad x \sim ab(\text{aspect1}(x, e, s)) \rightarrow \text{loc}(x, \text{result}(e, s)) = \text{loc}(x, s)$$

However, even by formalizing nonmonotonic reasoning, the common sense database is not achieved. "The problem is writing axioms that satisfy our notions of incorporating the general facts about a phenomenon. Whenever we tentatively decide on some axioms, we are able to think of situations in which they don't apply and a generalization is called for. Moreover, the difficulties that are thought of are often ad hoc" (McCarthy 1987).

One way to overcome this is to formalize the problem solving context of the AI system - ie: admitting that the axioms will only apply for certain situations, but by defining suitable situations for the problem solvers. However, this moves the emphasis away from general problem solving, although this is the pragmatic approach taken by Expert System developers (ie: bound the problem during system design).

What is obvious from this dialogue is that as the complexity of formalizing and representing common sense knowledge is tackled, solving one conceptual problem creates a number of even greater problems to overcome.

THE CYC DATABASE OF COMMON SENSE

CYC is an example of a "common sense" database of objects and their interactions. Lenat (1995; Lenat and Guha 1990) believes that the reason why AI programs do not scale up to more complex systems is because they lack common sense knowledge and are always developed for specific domains.

For many years, a large group of researchers has been working on the CYC common sense knowledge repository, which now contains vast amounts of data about the world. This enormous effort is expected to underpin

intelligent systems in the future - a once and for all repository of information that any program can use. It has already been used successfully as a bridging application (because of its common sense ontology) for interoperability between heterogeneous AI systems with their varied knowledge representation formalisms.

SOCIAL COMMON SENSE AND AI MODELS

In addition to the problems described above for trying to represent common sense knowledge which is mainly procedural and therefore may be thought of as being "cognitive", there are conceptual problems when trying to tackle reasoning about social skills common sense.

Rules of behaviour or heuristics for manipulating social common sense knowledge are difficult to elicit (as is the knowledge itself) because the skills observed vary according to the person's perception of the situation he/she is in, and according to personality, experience and other factors. Society, or social context is a very important factor here, and this means that we are faced with the challenge posed by the social constructionists - the representation of the social context for which the skill is relevant. Social cognition is much more difficult to model than "cognitive" common sense skills.

Of course, the modelling of social common sense would invariably require the implementation of a nonmonotonic formalism and reasoning process, as social processes are generally not simple and discrete. It has already been pointed out that manipulating knowledge of this nature is more complex than manipulating discrete events leading to simple truth values.

CONCLUSION

This article was written as a brief overview of the problems and techniques used to model common sense in computer programs. We accept that this article only scratches the surface of a topic which is very wide and involves a number of scientific disciplines, and that not all of the key research in the area of cognitive modelling of common sense is included here. Given these limitations, however, we have shown that common sense itself is difficult to describe and qualify. We have shown that there are a number of different ways of looking at common sense, and that not all psychologists agree on what constitutes common sense.

In our approach, we stated that common sense may be thought of as either cognitive common sense, or social

common sense, where the former concerns everyday problem solving, the latter concerns the way in which we interact with society. We have attempted to show that there is a considerable body of work on modelling cognitive common sense - that this has been met with success for a limited range of applications. Social common sense knowledge is however, much more difficult to elicit and to represent and there has been less work done on this.

This is partly due to the fact that programs with social common sense have not been relevant until recently, when the desire to model human behaviour has had a number of practical uses, eg: the automation of human forces in military mission rehearsal training simulators. Despite many years of research into improved knowledge representation formalisms and heuristics for using stored knowledge - common sense or otherwise, the production of a true general problem solving machine that can manipulate widely applicable common sense knowledge still eludes those at the forefront of this research.

FOOTNOTE

(1) A knowledge base is said to be monotonic if the addition of a new sentence; ie: piece of information does not affect the truth value of all of the other existing sentences (or existing information) within it. In contrast, a nonmonotonic knowledge base contains information the truth of which can alter according to certain exceptional conditions. The representation used to store the knowledge in a nonmonotonic knowledge base must be able to describe default values for normal conditions, as well as exceptional values for exceptional conditions.

Nonmonotonic logic is an example of a representation language that allows for nonmonotonic reasoning about knowledge which may be true or false depending upon whether exceptional conditions are prevalent.

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Daniel Allsopp & Kevin Brewer

Article written June 2001

NORMALITY, CONSUMERISM, AND CIVIL RELIGION

INTRODUCTION

Any society or culture has clear norms that individual members of that society or culture must follow, and others that they should follow. Those who don't are seen as deviants.

In this society, which can be called "consumer capitalism", the norms are based around buying. But to make this drive more powerful, consumerism is not just an economy system, but a "civil religion".

DEFINING NORMALITY

Rosenhan and Seligman (1989) use an oft quoted definition of normality as "simply the absence of abnormality". Unfortunately this is a truism, and is not that helpful in practice.

The terminology is varied in this area and includes: "deviant", "insanity", "mental illness", "behaviour disorder", or "problems with adjustment". Each term meaning something slightly different, but at the same time the same thing. There are all saying that the person is doing something "wrong" - whether that is illegal or not. Often the greater sin is not illegal, but the violation of implicit social norms.

For example, parents who decide not to buy their children presents or to celebrate Christmas. There are a variety of terms, like "scrooge", to make it clear that these parents have done something obviously "wrong". This is worse if the parents do not have an excuse, like an alternative religious view. It is not celebrating Christmas that is just the norm, it is celebrating it in a specific way. So many "traditions" and things to do the "proper" Western Christmas, or, as the advertisers say, the "perfect Christmas".

ECCENTRICS

Weeks and James (1995) have studied "eccentrics" in history, and those alive today. These are individuals who are clearly non-conformist in their lives, and often not concerned about that fact. It is easy to label them and their behaviour as signs of psychosis. It is important to denigrate any individual who is living happily as a non-conformist because this threatens the whole fabric of conformity and normality.

Weeks and James performed a Present State

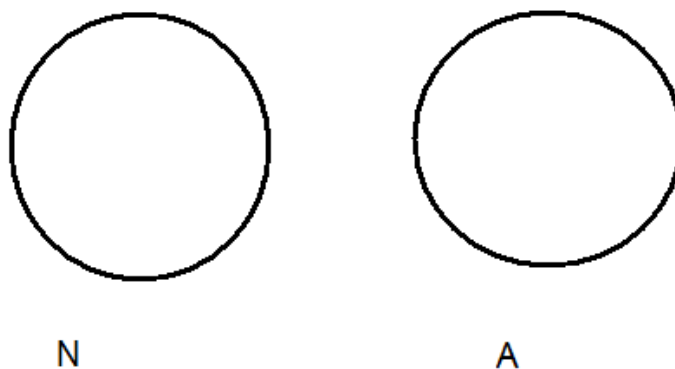
Examination (a standard psychiatric examination) on 100 "eccentrics", and found that less than 10% showed any symptoms associated with psychosis, like thought disorders or hallucinations.

CONCEPTUALISING NORMALITY

It is possible to note a number of ways of conceptualising normality and abnormality:

1. Two separate clearly distinct groups

- here there are two different groups of behaviour, which are separate. For example, the state of mind in mental ill is clearly different to the "everyday state of mind". There are no inbetweens (figure 1).

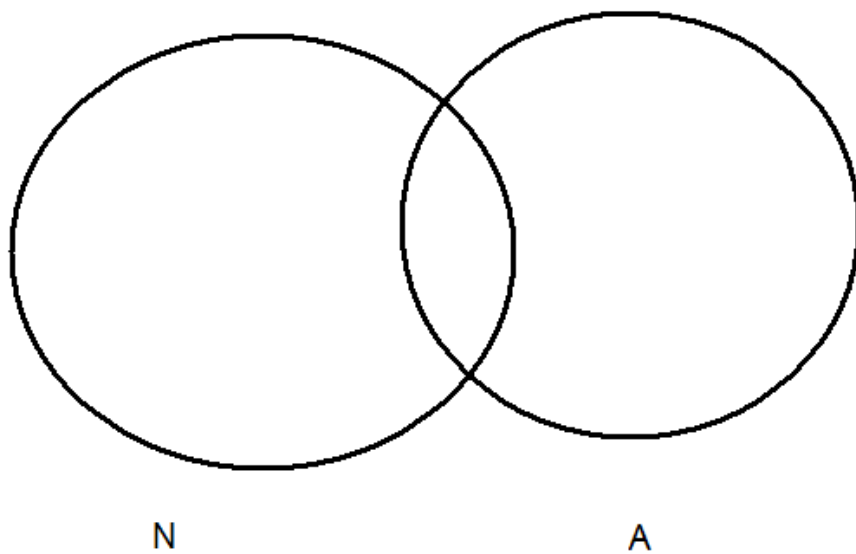


(N = normal behaviour; A = abnormal behaviour)

Figure 1 - Normal and abnormal as two separate groups.

2. Two clearly distinctive groups with small overlapping

- this is similar to above but it is accepted that there is a small overlap between what is normal and abnormal. For example, mild depression and unhappiness could be on the normal side, while major depression is on the abnormal side of the overlap (figure 2).



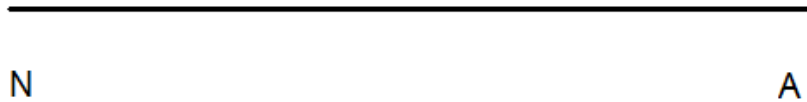
(N = normal behaviour; A = abnormal behaviour)

Figure 2 - Normal and abnormal as two overlapping groups.

3. A continuum from normal to abnormal

- with this conceptualisation of normality and abnormality, it is a continuum along which individuals and behaviours exist (figure 3).

Linnett (2000) believes it is possible to move positions along the continuum, and even be at multiple positions at the same time. For example, an individual competent at their job to combat depression. Overall, all behaviours are along the continuum. Thus severe mental illness is along the continuum from the "everyday state of mind"; ie: they are not distinctly different groups.



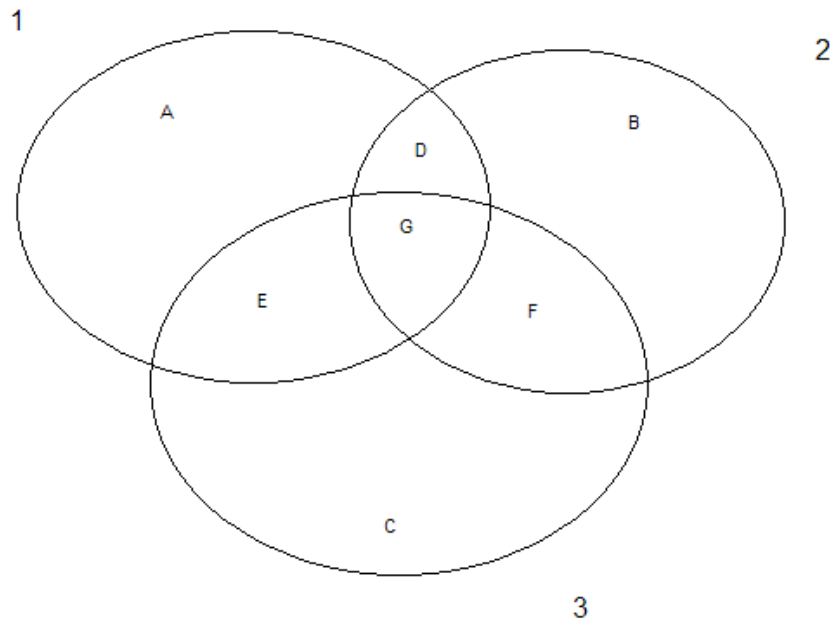
(N = normal behaviour; A = abnormal behaviour)

Figure 3 - Normal and abnormal as a continuum.

4. Often in defining normality, there will be overlaps between criminal and ill behaviour. However, both terms are socially constructed.

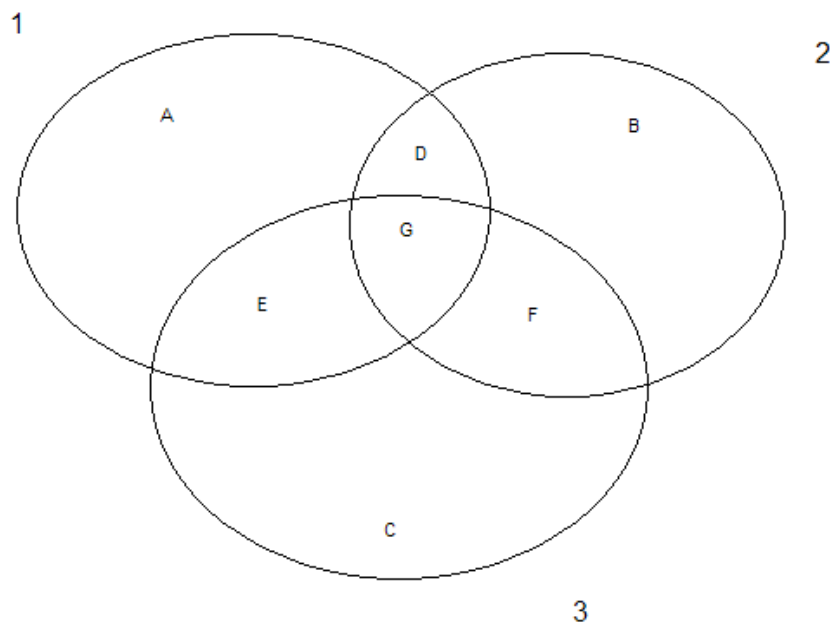
Stone (1975 quoted in Gleitman 1991) (figure 4) makes the distinction between three intersecting circles of "mad", "bad" and "normal". Depending on the intersection of the circles, certain behaviour will be normal or abnormal.

5. Figure 5 adapts the above idea to three intersecting circles of illegality, immorality, and illness. Again depending on the intersection of the circles, the definition of normality and abnormality will change.



1 = bad; 2 = mad; 3 = normal; A = criminal; B = crazy; C = normal behaviour; D = psychopath; E = troublesome (eg: reckless driver); F = self destructive (eg: alcoholic); G = objectionable (eg: child abuse)

Figure 4 - Normal and abnormal as three overlapping circles - abnormal, mad and bad.

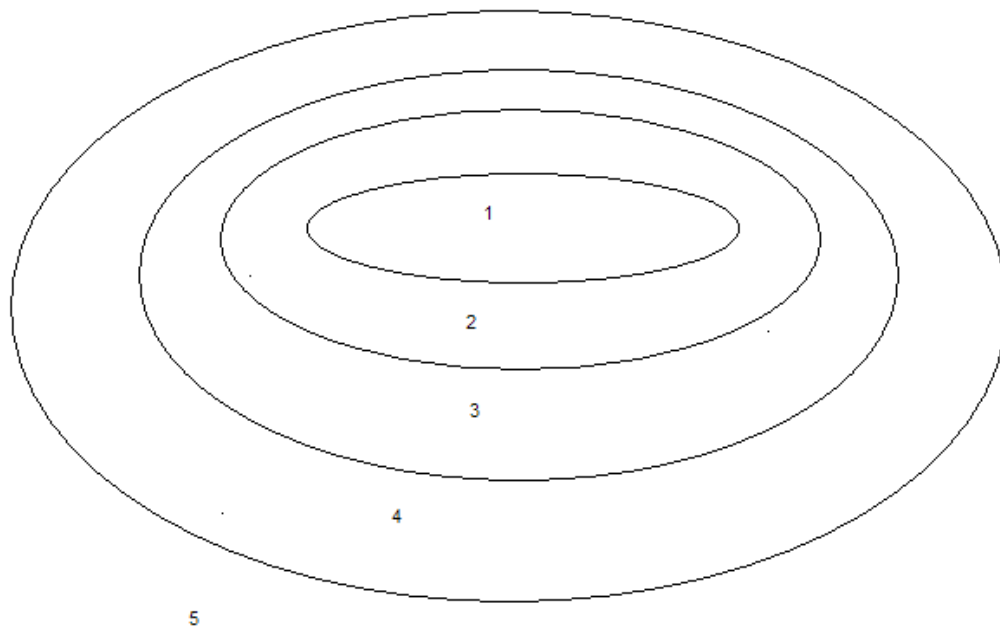


1 = illegal; 2 = immoral; 3 = ill; A = theft; B = child prostitution; C = severe mental illness; D = murder; E = criminal psychopath; F = sexual deviations (eg: paraphilia); G = exhibitionism

Figure 5 - Normal and abnormal as three overlapping circles - illegal, immoral and ill.

6. Circles of normality

- each society or culture has a series of norms which establish what is acceptable and unacceptable behaviour. Usually there are degrees of acceptability: from obligatory to desirable and permissible, to unacceptable. These degrees of acceptability can be represented as a series of circles, with obligatory being at the centre. Overall there will be the distinction between the larger circle of normality, and outside - abnormality (figure 6).



1 = obligatory/required; 2 = desirable; 3 = acceptable/permissible; 4 = tolerable; 5 = unacceptable

Figure 6 - Circles of normality.

CIRCLES OF NORMALITY: EXPLANATION OF FIGURE 6

1 = obligatory/required

- this is the most important behaviour in any situation or society, and must be performed. Refusal or failure to do so is a clear sign of abnormality. Usually there will be little flexibility or choice. Often what is required goes hand in hand with what is unacceptable as a dichotomy.

This category includes minor behaviours, like table manners, through to major behaviours of how to live life. For "consumer capitalism", this revolves around the purchasing with money of products and services. There are clear sanctions for failure to perform these behaviours; eg: failure to pay for items leads to imprisonment.

2 = desirable

- this category allows for some flexibility and variations in behaviour. For example, how the person dresses in particular situations may be included here. The sanctions may include hostile reactions of ridicule and staring, or private rejection.

3 = acceptable/permissible

- this category accepts variations of sub-cultures, and the fact that society is made up of many different viewpoints. The sanctions tend to be private, but some public censure.

4 = tolerable

- this is the last category of normality, and is only just inside the larger circle.

This behaviour is tolerated, particularly if the person has a justification for their behaviour. In this way, mild mental illness can be used as an excuse, or the "sick role" (Parsons 1951). Otherwise, there is a tendency to marginalise such individuals. Eccentrics could be placed in this category.

5= unacceptable

- this is outside both the larger circle of normality, and the small circles of degrees of normality. This behaviour is standing directly in opposition to what is obligatory. It can be either illegal, and/or "immoral", or simply different.

There will be a series of sanctions for such individuals, and, in some cases, attempts will be made to justify the behaviour as serious mental illness or with the "sick role" again.

Szasz (1963) notes with the labelling of violence: "By codifying acts of violence as expressions of mental illness, we neatly rid ourselves of the task of dealing with criminal offences as more or less rational, goal-directed acts, no different in principle from other forms of conduct".

The greatest threat to normality, particularly for those groups with vested interests in obligatory behaviour are those individuals who choose this category and then say that they are happy with their lives. For example, individuals who decide to follow non-consumer lifestyles. If they become monks or nuns, there is a

justification for their behaviour, and the behaviour may be tolerable. But those individuals who dare to be different cannot be allowed to co-exist.

Either they are physically marginalised (eg: living in the countryside) or must be socially marginalised by both explicit and implicit criticisms. Often the latter is stronger, because everything in society is structured to tell these individuals that their lifestyle is "wrong".

Marginalisation can manifest itself in a loss of rights, as under the Mental Health Act 1983, or the loss of status.

Sayce (1999) quotes the case of Dawn Collins, who was raped in 1996. The prosecution case was dropped because Dawn had a "history of mental health problems" and was seen as an "unreliable witness".

The position within the circles is not necessarily fixed. It is a question of working to keep the position in category 1, and society can be structured in such a way that "keeping up" can become the meaning of life. Nor is the individual always in the same category for every behaviour.

"Keeping up" requires thought about what to wear, what to eat and drink, what to say, what to do, where to live, and where to go. In other words, to be normal requires all the individual's efforts. But society helps by setting out the rules in the form of a social contract: "if you do this, then you will be in category 1".

In "consumer capitalism", this usually involves buying certain products or services. For example, if you buy this fashionable item, you will be clearly signalling to everybody that you are "category 1 normal". Thus products and services are status symbols, but as much about placing yourself visibly in "category 1 normal".

"Consumer capitalism" encourages the individual possession of products and services, but to do so is to fit into the group identity and norms with everybody else:

The notion of brand is an interesting one.. although people may claim that they are striving for individuality, they all end looking more or less predictably the same. Individualism is therefore a sham (Barley 1989 quoted in Dittmar 1992 pp13-14).

Societies are flexible, and individuals may attempt to redefine their behaviour into a different category. Power is crucial in this process. It is easier for those

with power in society to re-label and re-categorise their errant behaviour.

For example, politicians and those at the top of large corporations are able to do as normal many things that are not allowed for those lower down in the social hierarchy.

One attempt at recategorising behaviour can be seen with "hearing voices" (auditory hallucinations). Traditionally used as one of the criteria for schizophrenia (a clear category 5 behaviour). Groups, like the Hearing Voices Network, are trying to argue that it is possible to hear voices without this being a sign of schizophrenia or severe mental illness. Maybe they have just reached the edge of category 4.

The key meaning in "consumer capitalism" is products and services:

The meanings of consumer goods and the meaning creation accomplished by consumer processes are important parts of the scaffolding of our present realities. Without consumer goods, certain acts of self-definition and collective definition in this culture would be impossible (McCracken 1990 quoted in Dittmar 1992 p70).

It is crucial for the maintenance of the "circle of normality", and to keep everyone facing inwards, that any behaviour outside the circle is stigmatised. For example, feeling low and unhappy, even depressed, has to be clearly labelled in a negative undesirable way. A key myth of "consumer capitalism" is that new products will mean never being unhappy:

Variation in mood is a characteristically human way of responding to circumstances but unhappiness has become taboo in the late twentieth century, perhaps because it undermines the image that society wishes to project. Medicalisation diminishes the legitimacy of grief and discontent and therefore reduces the repertoire of acceptable human responses to events and denies people the opportunity to indulge their feelings. At the same time it diverts attention away from the political and environmental factors that can make modern life so difficult and distressing. It may be no co-incidence that the concept of depression has reached its present peak of popularity in western societies reeling from two decades of economic events and political policies which have been blamed for increased unemployment and marginalisation of a substantial section of the population (Moncrieff 2000 p25).

MEDICALISATION OF DEVIANCE

Kovel (1981) argues that in USA, in particular, a mental health "industry" has developed, which "buttresses the principal mode of social production" (ie which supports capitalism). In particular, the rise of the view of human difficulties as being individual in nature (ie: not caused by society or capitalism).

But the type of system is a specific type of capitalism - sometimes called "late" or "monopoly" capitalism. Kovel (1981) sees the "ascendancy of technology.. over living labour in the production process (and) this heightens the possibility of stagnation as a result of suffocation under the weight of automatically produced commodities" as the key characteristic of such capitalism.

But it is the response to this situation that matters - "a more or less systematic attempt to penetrate and control everyday life, including subjectivity".

This control is not carried out overtly because that would be tyranny. The covert control is exercised by clear definitions of normality and abnormality. The "mental health industry", for Kovel, is a key player. Conrad (1981) takes the story further:

the medicalization of deviant behaviour: the defining and labelling of deviant behaviour as a medical problem, an illness and mandating the medical profession to provide some type of treatment for it (p102).

Moncrieff (2000) notes the covert control:

The medical model of mental illness has facilitated the move towards greater restriction by cloaking it under the mantle of treatment. This process of medicalisation of deviant behaviour conceals complex political issues about the tolerance of diversity, the control of disruptive behaviour and the management of dependency. It enables a society that professes liberal values and individualism to impose and re-inforce conformity. it disguises the economics of a system in which human labour is valued only for the profit it can generate, marginalising all those who are not fit or not willing to be so exploited (p26).

Parsons (1951) sees illness as deviance because of its threat to the stability of the social system. Crime can be seen as a willing violation of norms and can be given clear penalties. Illness can be classed as an unwilling violations of the social norms, and the

creation of the "sick role" is a means of penalising that behaviour.

The "sick role" has four clear characteristics:

- i) exemption from normal responsibilities while ill;
- ii) the individual is not responsible for the causes of the condition and cannot "get well" by their own efforts;
- iii) the individual must recognise the undesirable nature of their state and want to get better;
- iv) the individual must accept the advice of the expert to "get well".

However, there is often a blurring between illness and crime - both are "socially constructed designations for deviance" (Conrad 1981).

Overall to define too much behaviour as criminal and punish is the overt tyranny.

Tyranny seems so far from modern democracy. The change may be sudden in terms of revolution or coup, or slowly over a period of time. There are a number of factors that allow the slow change:

- i) rise of individualism and decline in feelings of "society"; ie: a decline in responsibility for others;
- ii) consumption becomes an "opium of the people"; ie: preoccupation which reduces the awareness of other issues and changes;
- iii) electoral apathy shown by low turnout of voters;
- iv) lack of overt political dissent or alternatives - the options of political parties are very similar. This may account for (iii);
- v) marginalisation of any specific dissent.

By defining as illness it allows for treatment within the constraints of social norms. For example, the views on alcohol have changed historically. It has been seen as sinful or a moral weakness, and is a crime in certain overtly authoritarian societies. But in Western society, where alcohol producers are dominant players, it is better to call it "alcoholism" (an illness). This allows the majority of the population to partake of alcohol, and to control those who overstep the mark. The definition of illness is also different for each sex,

and the other extreme of not drinking can be challenged as well.

Conrad (1981) outlines the key condition for the medicalisation of deviance: "A behaviour or set of behaviours must be defined as deviant and as a problem in need of remedy by some segment of society".

This process of defining and labelling is linked to social power; ie: dominant power groups have the ability to label. For Dworkin (1979), this can be seen in gender relations as men have the power to label women's sexual behaviour (ie to define social reality). If the woman wants sex she is a "slut", if she doesn't, she is "frigid".

Lay people and psychiatrists alike tend to call people mentally healthy when they like their behaviour and mentally ill when they dislike their behaviour. Rebellious teenagers, unhappy housewives, dissatisfied workers, or lonely old people, for example, are often diagnosed as mentally ill, which is less a medical, scientific description than it is a judgment that the person so labelled has, in some way, behaved improperly (Chamberlain 1988).

For example, if some students defined price-fixing and profiteering among corporate executives as deviance and a problem in need of remedy, they ordinarily would not have the power to implement their definitions of the situation (Conrad 1981 pp111-2).

Conrad (1981) takes the example of hyperactivity in children. First defined as "hyperkinetic impulse disorder" in 1957, with "clear" symptoms of inattentiveness, restlessness, impulsivity, fidgeting, and aggression.

Currently it has been integrated into the mental disorder diagnosis system as Attention Deficit Hyperactivity Disorder (ADHD). In the US, it is estimated that between 3-5% of school age children are sufferers (Prentice 1996).

These behaviours may be common among children, but the medicalisation of such behaviours is beneficial to dominant power groups in society:

Schools now have an effective means of reducing the disruptiveness of such children; families too are less disrupted and parents need not feel guilt as the cause is considered to be organic; pharmaceutical companies ..have managed a substantial profit (p117).

Thus certain definitions and labels become

institutionalised, and vested interests work hard to maintain these definitions.

An even better example of the medicalisation of deviance can be seen with the behaviours known as "conduct disorders", and "oppositional defiance disorder". They are both what used to be called "juvenile delinquency"; behaviours shown by "difficult adolescents".

DSM IV (the American diagnostic system used by psychiatrists) notes four groups of behaviours for diagnosis of conduct disorders in adolescents:

i) aggressive to people and animals (7 indicators given; eg: cruelty to animals);

ii) destruction of property (2 indicators; eg: vandalism);

iii) deceitfulness or theft (3 indicators; eg: stealing money from parents);

iv) serious violation of rules (3 indicators; eg: running away from home).

These behaviours are now seen as psychiatric problems.

CONSUMER CAPITALISM

"Consumer capitalism" is a particular type of culture in a particular historical period, where the way of life is "organised around the consumption of goods and services for the mass market" (Hargreaves 1987 p132).

But as a culture, it has particular values and norms of behaviour. It is "a culture which has transformed traditional values of thrift and industry into a new spontaneous, life-course outlook celebrating impulsive, credit-fuelled consumption, self-expression and paganism" (Hargreaves 1987 p129).

The focus of "consumer capitalism" "resides in its ability to harness and channel bodily needs and desires - for health, longevity, sexual fulfilment and so on" (Hargreaves 1987 p134). While, for Featherstone (1991), "the inner logic of consumer culture depends upon the cultivation of an insatiable appetite to consume images".

Within "consumer capitalism" economic growth is a crucial process. Economic growth is based upon the expansion of the market; ie: selling more products. But

in Western societies, most markets are saturated ie people have enough of the products.

Therefore techniques must be used to sell more to people who don't really need it. Here are some of the techniques used:

i) differentiate products - produce different colours of the product, like toilet paper. The purchasing of a specific colour to fit the bathroom decor;

ii) increased buying ie to have more than one of the product; eg: two cars per person. The individual can now chose which car to drive today - how do they want to look today;

iii) linking products to status;

iv) linking products to changing fashions - the same product but packaging differently in different fashions;

v) continuous updating with new versions of the product;

vi) link the product with normality; ie: to not have the product is a sign of abnormality;

vii) change the consumption group eg men buying skin care products; younger children wearing fashion labels.

CIVIL RELIGION

Robert Bellah is particularly associated with civil religion, and noted its importance in American society. Civil religion is "that religious dimension, found in the life of every people, through which it interprets its historical experience in the light of transcendent reality" (Bellah 1967).

While others define it as the "association with non-supernatural religious objectives whose existence promotes solidarity for the group and a sense of belonging for the individual" (Bilton et al 1996 p561).

Bellah highlights the use of language in the US Presidential Inaugurations, which are "couched in a religious idiom, referring to God in general terms and to the travails of America as a modern Israel led out of Egypt" (Wallis 1983 p44). The references are focused upon unifying and integrating the community.

"Consumer capitalism", with its focus on acquiring more, can be seen as fulfilling the same role today in this society. Key to any religious behaviour are rituals - eg: the buying of presents at Christmas, or visits to

the modern out-of-town shopping complexes as leisure-time activity.

DEFINING RELIGION

There are a number of definitions and criteria for defining religion. Durkheim (1965) makes the distinction between "sacred" and "profane". "Sacred" is "that which is defined as extraordinary, inspiring a sense of awe, reverence, and even fear". While the "profane" is "that which is an ordinary element of everyday life".

While other definitions include a number of criteria for religion:

- i) dealing with the "ultimate problems of human life" (Yinger quoted in Hamilton 1995);
- ii) the function of group solidarity;
- iii) "the existence of supernatural beings that have governing effect on life" (Robertson 1970);
- iv) "an institution consisting of culturally patterned interaction with culturally postulated superhuman beings" (Spiro 1965);
- v) "collective conscience" (Durkheim 1965);
- vi) ritual, prediction and control (Malinowski 1954); or:

the provision of meaning to events that people do not expect, or feel ought not to happen - events that are frustrating and contradictory. Religion makes sense of these events in terms of an integrated and consistent pattern of meaning. This allows intellectual and emotional adjustment. On a more general level, this adjustment promotes order and stability in society (Haralambos and Holborn 2000 p435).

MODERN RELIGIOUSNESS

Lyon (1985) notes that religion can be used in different ways, and one way is as giving meaning to life: "symbols and rituals are still of the essence, but no reference at all need be made to God or the supernatural" (p10).

Geertz (1966) sees religion as symbols which motivate people and establish their worldview through a "several sense of the order of existence".

While Bellah's (1970) concept of "civil religion"

focuses on a God who rewards virtue and punishes vice, whatever these terms mean, and even if individuals agree on nothing else.

He (Bellah) follows Rousseau in defining it as a set or vaguely defined symbols or ideals with religious connotations which help invest public life or civil government with a seemingly sacred quality (Lyons 1985 p103).

For Ellul (1976), modern Western society is not the opposite of religious society, but is specifically "post-Christian". Within this type of society, certain ideas predominant:

- autonomy of the individual, only responding to themselves;
- individuals are rational, and free to choose good and evil; barring error, ignorance or passion, good is chosen;
- majority opinion establishes what is good and moral;
- society legitimises unlimited growth of power, technology, economy, higher living standards and greater productivity.

Within any religious or secular society, there will be the "sacred" (ie: placing something above criticism as the meaning of life). In a religious society, this would include the existence of God, and the priesthood. In modern Western societies, this includes technology, money, sex, and the nation-state. The "sacred" is reinforced by myths ¹ - of which the greatest myth is that progress is undeniably good. This is the phenomena that is never questioned.

However, the world produces unsolvable problems and insurmountable difficulties which progress has not dealt with. To some degree, "post-modernity" is the scepticism about progress as the answer without actually rejecting it. It attempts to make other suggestions without challenging progress.

While, for Goudzwaard (1984), four dominant goals exist in modern Western societies:

¹ "A myth is a story which is partially true, but which also obscures the truth by exaggerating one aspect of it, or just through popular, oversimplified elaboration" (Lyon 1985 p3).

- i) the creation of a better society;
- ii) the preservation of a people or a nation;
- iii) the preservation of wealth, and the "opportunity for continued material progress";
- iv) "guaranteed security".

These goals are not unacceptable to most people, but it is that the goals become the meanings of life. Goudzwaard calls them "the end".

They gain extraordinary significance, and everything is distorted for "the end".

The end distorts genuine norms and values. They are filled with a new content until they become useful instruments in motivating people to pursue the end (Goudzwaard 1984 p24).

More than that, individuals have to adjust to the goals, and the negative effects are seen as "an unfortunate but necessary sacrifice for the good cause". For example, unemployment and the unemployed are a sacrifice to future progress for all.

Finally, those who disagree in anyway are declared as a "traitor". It is not possible to let opposition exist. The opposition must be criticised and "scapegoated". The worse scenario would be for the opposition to show that it can exist happily without the goals. This is the modern day heresy, to say "I don't need these goals and I am happy". This is to challenge the existence of god(s).

We have become dependent on economic growth, and it has ensnared us. Though initially a relatively innocent tool, it has become established as a power against us. It coerces us and reveals to us what we must do to survive ..Our attitude toward economic growth is this: moderation, if necessary. Zero growth: only as a last resort. Taking a step backward: never (Goudzwaard 1984 pp51-2).

It is possible to see how "the end" of economic growth and progress distorts other values:

Every group, weak or strong, soon believed that it held a natural right to a larger slice of an ever-larger economic pie. An unwritten law stated that no one could fall behind. The consequence of this double distortion was a demand for more

economic growth regardless of the obstacles
(Goudzwaard 1984 p53).

We hear of 'market forces', or, in more
sophisticated language, of 'determinate solutions'.
The Market, spelt with a capital M, is the mechanism,
which if allowed to operate freely, sorts out
problems like unemployment (Storkey 1986 p20).

GIVING MEANING TO LIFE: WHAT "CONSUMER CAPITALISM" GIVES INDIVIDUALS

Existentialists have argued that life is based
around three concerns - time, choice, and meaningfulness.
In a sense, these are also the issues of traditional
religions. "Consumer capitalism" has an answer for all of
them.

i) Time

The finiteness of life as time moves ever onwards to
an ending or major transformation. "Consumer capitalism"
allows the individual to hide from these facts by buying
"youth" or "eternal life". Science and technology support
the view that the individual can overcome any obstacle by
purchasing the "correct" items.

Recently, terror management theory (Greenberg et al
1992) has shown how individuals maintain their self-
esteem in the face of finiteness by "maintaining faith in
a culture and living up to the standards and values of
that culture" (Pennington 2000).

The upshot is a striving to meet cultural norms, and
an anxiety if the norms are violated. This includes the
striving for inclusion to support the world-view, and a
repulsion for those who challenge it (Greenberg et al
1997).

ii) Choice

The agency of the individual, which is the apparent
foundation of "consumer capitalism", to buy what they
want. How much the individual is free to choose any
product or is "constructed to consume" what is given is
debatable.

Unfortunately, for existentialists, agency carries
the price of responsibility for that choice. Fromm (1960)
sees this responsibility as too much for many people, and
they seek to pass the responsibility to another - a
religious or political leader, or fashion. The irony of
Western societies is the exaltation of freedom and
individualism, which most people happily give up to do

what they are told by fashion.

The changing tastes and reactions of other people become a key arbiter in determining what we do and how we are to be (Stevens 1996 p199).

iii) Meaningfulness

The importance of finding meaning in life. "Consumer capitalism" gives that meaning. Everything can be focused on achieving and possessing more.

James (1997) looks at how in the second half of the 20th century, people generally have become materially richer than earlier generations, but this tends to be associated with an increase in, not happiness and satisfaction as you might expect, but unhappiness and dissatisfaction.

Inglehart (1990) notes that "After a while, people take what they have for granted and either want more or, when they reach saturation point, turn to the pursuit of other goals" (quoted in James 1997).

"Consumer capitalism" helps in this process of wanting more, and is determined to stop people from pursuing other goals that are not monetary. Thus even "alternative" pursuits of finding "life satisfaction" are marketed in special courses and books, and weekend retreats.

In order to drive people towards wanting more, it is vital for them to compare themselves to those above them in the social hierarchy (and/or to perfection). It is noticeable how often "perfect" or "perfection" is used by advertisers. Everybody knows that it is impossible to achieve perfect, but still people are driven to reach it - usually with the belief that the "right" product will help.

But upward comparison can also threaten self-esteem because one is in danger of feeling despondent at the gap between the model and oneself ..I may end up blaming myself and feel like a failure (James 1997 pp86-7).

Thus the need to buy more products to try and bolster the self-esteem. The individual is trapped in the situation of both wanting and needing more products. The individual's whole psychology is based around products because that is how society has constructed the individual. The individual is "constructed to consume".

However, society does not determine the individual in any simple sense; the process is a reciprocal, circular one in which individuals are both the products and the transformers of their social world. Societal structures, practices and conventions pre-exist individuals who learn and reappropriate them throughout their lifetime via symbol systems with common agreed meanings. But, at the same time, by doing so they simultaneously reproduce or even transform these structures and practices (Dittmar 1992 p69).

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KEVIN BREWER

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